AMENDMENTS TO THE CLAIMS

1. (**Currently Amended**) A method for selectively separating and purifying RNA from a mixture solution of nucleic acid containing DNA and RNA,

the method using a cartridge for separation and purification of nucleic acid comprising a container having at least two openings, and the container receives a nucleic acid-adsorbing porous membrane which a solution can pass through,

wherein the method comprising the steps of:

(1-a) adsorbing nucleic acid to the nucleic acid-adsorbing porous membrane;

(1-b) washing the nucleic acid-adsorbing porous membrane by a washing solution, while the nucleic acid is adsorbed to the nucleic acid-adsorbing porous membrane;

(1-c) subjecting the nucleic acid-adsorbing porous membrane to a DNase treatment;

(1-d) washing the nucleic acid-adsorbing porous membrane with the washing solution; and

(1-e) desorbing the RNA from the nucleic acid-adsorbing porous membrane by a recovering solution, so as to discharge the recovering solution out of the cartridge, resulting in separated and purified RNA,

wherein in the step (1-c), a total amount of a DNase solution is 130 μl or less per 1 cm2 of the nucleic acid-adsorbing porous membrane, and

wherein the nucleic acid adsorbing porous membrane has (a) a front area and a back area asymmetrical with each other and (b) comprises an organic material obtained by saponification of a mixture of acetyl celluloses different from each other in acetyl value.

2. (Original) The method for selectively separating and purifying RNA according to claim 1, wherein the DNase solution has a DNase concentration of 10 to 10000 Kunitz U/mL.

3-6. (**Cancelled**)

7. (Previously Presented) The method for selectively separating and purifying RNA according to claim 1, wherein the mixture solution of nucleic acid is a solution where a water-

soluble organic solvent is further added to a mixed solution obtained by mixing a nucleic acid solubilizing reagent added to a test sample with the test sample.

8. (Original) The method for selectively separating and purifying RNA according to claim 7, wherein the test sample is a cultured cell.

9. (Original) The method for selectively separating and purifying RNA according to claim 8, wherein the cultured cell is a cell grown in a suspension.

10. (Original) The method for selectively separating and purifying RNA according to claim 8, wherein the cultured cell is a cell grown in a monolayer.

11. (Original) The method for selectively separating and purifying RNA according to claim 7, wherein the test sample is an animal tissue.

12. (Previously Presented) The method for selectively separating and purifying RNA according to claim 7, wherein the test sample is homogenized before or after adding nucleic-acid solubilizing reagent.

13. (Previously Presented) The method for selectively separating and purifying RNA according to claim 7, wherein the nucleic acid-solubilizing reagent comprises at least one of a chaotropic salt, a nucleic acid stabilizing agent, a surfactant, a buffer and a defoaming agent.

14. (Original) The method for selectively separating and purifying RNA according to claim 13, wherein the chaotropic salt is at least one of a guanidine hydrochloride and a guanidine thiocyanate.

15. (Previously Presented) The method for selectively separating and purifying RNA according to claim 7, wherein the water-soluble organic solvent comprises at least one of methanol, ethanol, propanol and an isomer thereof, and butanol and an isomer thereof.

16. (**Currently Amended**) The method for selectively separating and purifying RNA according to claim 1, wherein the washing solution is a solution containing at least one alcohol selected from methanol, ethanol, propanol and an isomer thereof, and butanol and an isomer thereof, and wherein the washing solution contains said at least one alcohol in an amount of 1 to 100% by weight.

17. (Previously Presented) The method for selectively separating and purifying RNA according to claim 1, wherein the recovering solution is a solution having a salt concentration of 0.5 mol/L or less.

18. (Previously Presented) The method for selectively separating and purifying RNA according to claim 1, wherein a pressure difference-generating apparatus is detachably connected to one opening of the cartridge for separation and purification of nucleic acid.

19. (**Cancelled**)

20. (**Currently Amended**) An automated apparatus for selective separation and purification of RNA from a mixture solution of nucleic acids containing DNA and RNA comprising:

a cartridge comprising a container having at least two openings and a nucleic acid-adsorbing porous membrane comprised of an organic polymer inside said container, wherein said organic polymer has hydroxyl groups which adsorbs a nucleic acid, and wherein the nucleic acid adsorbing porous membrane has a front area and a back area asymmetrical with each other and comprises an organic material obtained by saponification of a mixture of acetyl celluloses different from each other in acetyl value, and

a pressure difference-generating device connected to one of said openings.

21. (Cancelled)

22. (**Currently Amended**) A method for selectively separating and purifying RNA or DNA, which comprises the steps of:

(2-a) adsorbing nucleic acid to a nucleic acid-adsorbing porous membrane by passing a mixture solution of nucleic acid containing RNA and DNA through the nucleic acid-adsorbing porous membrane;

(2-b) washing the nucleic acid-adsorbing porous membrane by passing a washing solution through the nucleic acid-adsorbing porous membrane, while the nucleic acid is adsorbed to the nucleic acid-adsorbing porous membrane; and

(2-c) desorbing the nucleic acid from the nucleic acid-adsorbing porous membrane by passing a recovering solution through the nucleic acid-adsorbing porous membrane, resulting in the separated and purified RNA or DNA,

wherein the washing solution contains a water-soluble organic solvent having a concentration of 50% by weight or less, and the washing solution does not contain a chaotropic salt and

wherein the nucleic acid-adsorbing porous membrane has (a) a front area and a back area asymmetrical with each other and (b) comprises an organic material obtained by saponification of a mixture of acetyl celluloses different from each other in acetyl value.

23. (Original) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein the washing solution contains a water-soluble organic solvent having a concentration of 5 to 40% by weight.

24-27. (**Cancelled**)

28. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein the mixture of nucleic acid containing RNA and DNA is a solution where a water-soluble organic solvent is added to a solution obtained by treating a cell or virus-containing test sample with a nucleic acid-solubilizing reagent.

29. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 28, wherein the test sample is a cultured cell.

30. (Original) The method for selectively separating and purifying RNA or DNA according to claim 28, wherein the test sample is an animal tissue.

31. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 28, wherein the test sample is homogenized before or after adding nucleic-acid solubilizing reagent.

32. (Original) The method for selectively separating and purifying RNA or DNA according to claim 28, wherein the nucleic acid-solubilizing reagent comprises at least one of a chaotropic salt, a nucleic acid stabilizing agent, a surfactant, a buffer and a defoaming agent.

33. (Original) The method for selectively separating and purifying RNA or DNA according to claim 32, wherein the chaotropic salt is at least one of a guanidine hydrochloride and a guanidine thiocyanate.

34. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein the water-soluble organic solvent is at least one alcohol selected from methanol, ethanol, propanol and an isomer thereof, and butanol and an isomer thereof.

35. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein the washing solution is a solution containing at least one alcohol selected from methanol, ethanol, propanol and an isomer thereof, and butanol and an isomer thereof in an amount of 5 to 50% by weight.

36. (Previously Presented) The method for selectively separating and purifying RNA according to claim 22, wherein the washing solution contains water-soluble salt.

37. (Previously Presented) The method for selectively separating and purifying RNA according to claim 36, wherein the concentration of water-soluble salt is 10 mmol/L or more.

38. (Previously Presented) The method for selectively separating and purifying RNA according to claim 36, wherein the concentration of water-soluble salt is in a range of 10 mmol/L to 1 mol/L.

39. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein the washing solution is a solution containing a chloride in an amount of 10 mmol/L to 1 mol/L.

40. (Previously Presented) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein the recovering solution is a solution capable of desorbing an adsorbed RNA from the nucleic acid-adsorbing porous membrane having a salt concentration of 0.5 mol/L or less.

41. (**Currently Amended**) The method for selectively separating and purifying RNA or DNA according to claim 22, wherein in each of the steps of (2-a), (2-b) and (2-c), the sample solution containing the nucleic acid, the washing solution and the eluting solution are passed through the nucleic acid-adsorbing porous membrane by using (i) a cartridge for separation and purification of nucleic acid comprising a container having at least two openings, and the cartridge for separation and purification of nucleic acid receives the nucleic acid-adsorbing porous membrane which a solution can pass through in the container and (ii) a pressure difference-generating apparatus, and wherein the pressure difference-generating apparatus is a pump detachably connected to one opening of the cartridge for separation and purification of nucleic acid.

42. (**Currently Amended**) A kit comprising:

a cartridge for selective separation and purification of nucleic acid wherein the cartridge comprises a container having at least two openings and a nucleic acid-adsorbing porous membrane comprising an organic polymer inside said container, wherein said organic polymer has hydroxyl groups which adsorbs a nucleic acid, and wherein the nucleic acid-adsorbing porous membrane has a front area and a back area asymmetrical with each other and comprises an organic material obtained by saponification of a mixture of acetyl celluloses different from each other in acetyl value,

a nucleic acid-solubilizing reagent comprising at least one of a chaotropic salt, a nucleic acid stabilizing agent, a surfactant, a buffer, and a defoaming agent, and

a pressure difference-generating apparatus.

43. (Cancelled)